One high quality, level III case-control study found colicky infants fed apple juice had significantly increased breath hydrogen excretion and increased crying time and one level II, poor quality study reported no effect using hydrolysed lactose for breast and formula-fed infants.
Conclusions: More commonly colic studies are conducted on formula-fed infants. The strongest evidence supports the use of hydrolysed formulae, there is some support for use of soy-based formulae and no support for the use of fibre-supplemented formulae. Evidence to support altering the maternal diet is limited and inconclusive.
Funding source(s): N/A.

THE NUTRITION TRANSITION IN KOREA AND AUSTRALIA: CHILD GROWTH, INFANT MORTALITY AND DIABETES

M.K. Lee [1]. [1] *School of Health Professions, Murdoch University, WA, Australia*
E-mail: M.K.Lee@murdoch.edu.au

Background/Aims: To review the nutrition transition in the Republic of Korea and Australia and associations with diabetes prevalence
Methods: A systematic review of relevant literature
Results: In the past 50 years Korea has improved its health and nutrition indicators more rapidly than any other large country. Infant mortality declined from 350 at the beginning of the 20th century to 109 in 1950 and is currently 4.01 per 1,000 live births. The equivalent rates for Australia are 103, 24.5 and 4.3 per 1,000 live births respectively. Completed height of boys and girls in Korea has increased at rate of 1.1 cm/decade for boys and girls in Korea compared to Australia (0.7 and 0.1 cm). Life expectancy has increased in Korea from 52.4 years in 1960, to 79.6 years in 2012 (Australia 71 and 82.1 years). The rapid improvement in nutrition and the continuing momentum for growth has contributed to increasing rates of obesity and diabetes. Diabetes is now found in 9.0% of Korean adults compared to 7.2% of Australians.
Conclusions: Korea has had the most rapid improvement in nutrition and growth rates of any OECD country, but this is being accompanied by a rapid increase in obesity and diabetes.
Funding source(s): Murdoch University.

A SYSTEMATIC REVIEW: THE PREVENTION OF ATOPIC ECZEMA COMPARING BREAST- AND FORMULA-FED NEWBORN INFANTS

A. Anderson [1], Y. Probst [1]. [1] *School of Medicine, University of Wollongong, Australia*
E-mail: aka797@uowmail.edu.au (A. Anderson)

Background/Aims: Atopic eczema (AE) is one of the most common chronic allergic diseases with increasing prevalence worldwide occurring in infancy. The treatment method is topical corticosteroids. Recent studies have shown breastfeeding and extensively hydrolysed formulas have a preventative effect when fed exclusively for 4 months. This study aims to evaluate the relationship between breast and formula feeding on AE prevention in newborn infants.
Methods: A systematic literature review using MEDLINE and Scopus databases was conducted using the search terms: infant* OR newborn* AND "atopic eczema" OR "atopic dermatitis" AND breastfe* OR "artificial milk" OR "infant formula" OR formula. Exclusion criteria included: pregnancy OR pregnant, AND food OR diet AND maternal OR mother*. No restrictions were placed on the publication date. Comparisons were made between the two feeding methods for infants (0-1 month old) with AE.
Results: Ten publications were included. No significant differences between feeding methods were found. Synbiotics were shown to modulate the intestinal microbiota. γ-linolenic acid increased immunoglobulin-E (IgE). Oligosaccharides may benefit AE through microbiota fermentation in the colon to develop complex microflora such as *Bifidobacteria* and *Lactobacilli*. No beneficial effects were seen for *Lactobacillus rhamnous* GG, although it may have an effect in IgE-sensitive infants.
Conclusions: Benefits for both feeding methods were found, where extensively hydrolysed formula might play a beneficial role in AE prevention in pre-term infants. Exclusive feeding as per current recommendations should be considered for infants with increased risk of AE development.
Funding source(s): N/A.

PARENTAL ATTITUDES AND BELIEFS TOWARDS FOOD PROVISION AND CHANGE IN ADOLESCENT WEIGHT STATUS

T.A. McCaffrey [1], M. Dean [2], K. Baxter [3], J.A. Batch [4], H. Truby [1,3]. [1] *Department of Nutrition & Dietetics, Monash University, VIC, Australia;* [2] *Queens University, Belfast, UK;* [3] *Children's Nutrition Research Centre, The University of Queensland, QLD, Australia;* [4] *Department of Endocrinology and Diabetes, Royal Children's Hospital, Herston, QLD, Australia*
E-mail: tracy.mccaffrey@monash.edu (T.A. McCaffrey)

Background/Aims: The management of adolescent overweight and obesity is an important public health issue, particularly due to the associated health risks. We investigated the association between parental responses to provision of food related questions guided by the Theory of Planned Behaviour (TBP) and change in BMI *z*-score in obese adolescents over a 12 week weight loss intervention.
Methods: At week 0, 63 parents completed a questionnaire to assess their attitudes towards providing a healthy diet using components of TBP; intention (3 items); beliefs (9 items); attitudes (factor 1 "my feelings" 2 items; factor 2 "feelings about child" 5 items); subjective norms (SN); perceived control and past behaviour. Adolescent weight and height were measured at week 0 and week 12 and change in BMI *z*-score calculated. Spearman correlations were used to determine associations.
Results: Median (Interquartile range) change in BMI *z*-score over the 12 week intervention was -0.14 (-0.21, -0.04). Parental constructs of TBP did not predict change in BMI *z*-score for the adolescents (r = -0.002 to 0.116, $p >$ 0.05). As expected, SNs were associated with parental intentions ($r = 0.255$, $p < 0.01$) and feelings about providing a healthy diet ($r = 0.400$, $p < 0.01$).
Conclusions: In this study there was no association between parental attitudes and beliefs of food provision and change in adolescent BMI *z*-score. However given the complexity of the obesogenic environment, future studies should continue to assess the associations between parental attitudes and beliefs and adolescent weight change.
Funding source(s): NHF, the Royal Children' Hospital Foundation, ANZ Trustees and the University of Queensland.

FAMILY MEALS WITH YOUNG CHILDREN IN AUSTRALIA – AN OPPORTUNITY FOR NUTRITION PROMOTION

E. Litterbach [1], K. Campbell [1], A. Spence [1]. [1] *Centre for Physical Activity and Nutrition Research, Deakin University, Australia*
E-mail: eloise-kate@hotmail.com (E. Litterbach)

Background/Aims: Little is known about Australian family mealtime behaviours. Research into mealtimes with young children is a priority given the potential to improve dietary intakes using this setting. Given the socioeconomic patterning of diet and health, it is important to describe differences by socioeconomic position (SEP).
Methods: A cross-sectional online survey measured family meal behaviours and frequency of 464 Australian parents with a child aged six months to six years. Maternal education (university vs. non-university) was used to measure SEP. Ordinal and binary logistic regression analyses were performed to assess differences by SEP.
Results: Preliminary analysis indicated 70% of participants ate family dinners at least five days/week. Higher SEP was associated with more frequent family lunches (OR 1.58, $p = 0.03$). Most children consumed breakfast, lunch and dinner sitting at a table/bench (73%, 59% and 82%, respectively), and this was associated with higher SEP for breakfast (OR 1.75, $p = 0.02$), dinner (OR 1.87, $p = 0.03$) and snacks (OR 1.73, $p = 0.02$). Snacks were most frequently consumed while moving around the house (30%) and less frequently consumed with parents than other meals (62% eating snacks together less than five days/week). Most children (73%) watched TV during some mealtimes, and 38% watched TV on average at least one meal/day. Frequent television viewing during meals was inversely associated with SEP (OR 0.40, $p < 0.001$).
Conclusions: Family meals provide much opportunity to promote healthy eating. Many of the reported behaviours support healthy eating but improvements could be made regarding eating location, particularly for those of lower SEP.
Funding source(s): N/A.